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**Defense Information Infrastructure (DII)
Common Operating Environment (COE)**

**System Administrator's Manual (SAM) for
FTP, version 1.0.0.2**

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1. Scope

1.1 Identification

This System Administrator's Manual (SAM) document is for FTP (segprefix FTP) Version 1.0.0.2 for the Solaris 2.5.1 Platform.

1.2 System Overview

FTP is a windowed interface to ftp. It hides the interaction with ftp and the need for knowing commands like 'get' and 'put', and the difference between 'get' and 'mget'. It provides the ability to transfer directories, which ftp by itself does not do, and has an extended form of ftp's .netrc file.

2. Referenced Documents

Installation Procedures (IP) for FTP version 1.0.0.2, 12 December 1997

3. Operating Guidelines

FTP tool is run from an icon in the SysAdm Account Group.

4. Installation Overview

This version of FTP can be installed in accordance with the Installation Procedures document for FTP version 1.0.0.2.

5. System Administration Utilities

None.

6. Operation/Maintenance Procedures

Refer to Appendix A, FTPTOOL Man Page for operation/maintenance procedures.

7. Error Recovery Guidelines

None.

8. Notes

None.

A. Appendices

Appendix A. FTPTOOL Man Page (ftptool.man)

FTPTOOL 1 "22 June 1992" "X Version 11"

NAME

ftptool \- A windowed interface to ftp.

SYNOPSIS

ftptool

generic-tool-arguments

filename.tar

DESCRIPTION

ftptool is a (hopefully) easier interface to ftp. It hides the interaction with ftp and the need for knowing commands like 'get' and 'put', and the difference between 'get' and 'mget'. It provides the ability to transfer directories, which ftp by itself does not do, and has an extended form of ftp's .netrc file.

OPTIONS

generic-tool-arguments

ftptool (should) accept the generic tool arguments described in xview(1).

filename.tar

The argument is a tar file (extension .tar). Instead of starting up as ftptool, start up to examine the tar file. This is a simple tool to list the contents of the tar file, and extract into a specified directory. Provided in this manner to avoid a proliferation of programs.

USAGE

.Xdefaults File Options

You can specify a number of defaults using the .Xdefaults file. These can all be set using the Properties window (options affecting window placement or visibility are currently set depending on the current window configuration). Other than those controlling the size and placement of the windows, the options are, with the first value being the default:

ftptool.ArchiveViewer	(ftptool)
ftptool.AutoConnect	(False/True)
ftptool.AutoShowStatus	(False/True)
ftptool.latchWindowVisible	(False/True)
ftptool.ConfirmDeletes	(True/False)
ftptool.DefaultViewer	(textedit %f)
ftptool.DirectoryCacheSize	(5 {0 - 20})
ftptool.GenUniqueLocalNames	(False/True)
ftptool.GenUniqueRemoteNames	(False/True)
ftptool.HostInfoVisible	(False/True)
ftptool.HostInfoAdvancedVisible	(False/True)
ftptool.ignoreCase	(False/True)
ftptool.initialPassword	(login@hostname)
ftptool.KeepConnectionAlive	(False/True)
ftptool.LocalShowHiddenFiles	(False/True)
ftptool.LocalSortField	(Name/Date/Size)
ftptool.LocalSortGrouping	(False/True)
ftptool.LocalSortOrder	(0/1) { Alphabetical }
ftptool.LocalWindowVisible	(False/True)
ftptool.LogSession	(False/True)
ftptool.OpenLookMode	(True/False)
ftptool.PostScriptViewer	(pageview %f)
ftptool.ShowHiddenFiles	(False/True)
ftptool.SortField	(Name/Date/Size)
ftptool.SortGrouping	(False/True)
ftptool.SortOrder	(0/1) { Alphabetical }
ftptool.TryProxy	(False/True)

When saving defaults, ftptool now saves them in .ftptooldefaults in your home directory (overwriting the existing information).

Batch mode

Ftptool has a batch mode. Instead of selecting files in a directory, then having to transfer all those files before leaving the directory, selections will be saved in either a Send or Receive list. When you finally decide to copy the files, they will all be copied at once (and they can be in different directories). The hierarchy on the source machine is duplicated starting

at the current directory on the destination machine. For example, if you have these files in your Batch Receive list:

```
/export/source/BSD  
/usr/source/Games/NetHack3.10.tar.Z  
/pub/gnu/gcc.tar.Z
```

If your current local directory is /var/tmp, copying these to the local machine will create the files:

```
/var/tmp/export/source/BSD  
/var/tmp/usr/source/Games/NetHack3.10.tar.Z  
/var/tmp/pub/gnu/gcc.tar.Z
```

(and any other directories and files that are in a selected directory. Directories are recursively copied, as always). When this occurs is determined by the Batch window.

The Remote Window

This is where you usually interact with `ftptool`. It operates from the various buttons described below.

File Menu

Copy

Copy selected files and/or directories from the local machine to the remote machine, or from the remote machine to the local machine.

Delete

Delete selected files from the local machine, or the remote machine.

List Directory

List the current remote directory in the Session Log window. There are two options, DIR and LS. They do the corresponding ftp commands. DIR can be used to determine the output format of the host, so you can set the DIR template appropriately.

Compress File

Compress the selected local files.

Uncompress File

Uncompress the selected local files.

Create Tar File

Create a tar file containing the selected local files.

Extract Tar File

Extract the selected tar files. This starts the 'tar viewer' for each file, which by default is ftpool.

View Menu

Remote File

Transfer the remote file to a temporary directory, uncompress if necessary, then start the appropriate file viewer on the file. This will be the tar viewer if the file ends in .tar, pageview if it is a PostScript file, or the default viewer (textedit) otherwise.

Local File

Uncompress if necessary, then start the appropriate file viewer on the file. This will be the tar viewer if the file ends in .tar, pageview if it is a PostScript file, or the default viewer (textedit) otherwise.

Local Directory List

Show the local directory window.

Session Log

Show the session log window. Only active if logging is enabled.

Host Information

Show the host information window.

Transfer Status

Show the transfer status window.

Batch Schedule

Show the Batch Schedule window

About Ftptool

Show the About window.

Properties Menu

Tool Properties

Bring up the tool properties window. See the Properties section.

Local File

Show the local file properties window. This shows such elements as permissions, owner, and group for the last selected file.

Remote File

Show the remote file properties window. This shows such elements as permissions, owner, and group for the last selected file. If connected to a non-UNIX machine, or one that has non-ls style 'dir' command output, most fields will be "unknown".

Save Layout

Save the layout of ftpool. This includes the sizes of the windows, and whether some of them are visible. The layout is now saved in the file `.ftptooldefaults` in your home directory.

Connect Button

Try to connect to the host listed in the Host Information window. If that window is not displayed, it will be displayed and a connection will not be attempted.

Abort Button

Active only during a transfer. Abort the transfer of all the files selected after the current one completes.

Remote Directory Field

Shows the current remote directory. This field is also editable, so you can type in a directory and press return to change to it.

Remote Directory List

List of remote files in the current remote directory. Directories are in bold, with a trailing '/'. You can double-click on a directory to change to it, or use the pop-up menu. Sorting is controlled by properties. Several useful functions are in the pop-up menu.

Host Information Window

New Connection

Selecting this button clears the fields in the window. This would be selected if you wish to connect to a new site. It does not try to connect.

Hosts

This is a menu of the hosts in your host list. Selecting a host fills in the information below. In addition, if auto-connect is set, it will try

to connect to the host.

Host List

Save

Save the current host list. It will attempt to save to a file named `.ftptoolrc` in your home directory. If that fails, it goes to the current directory.

Load

Load the current host list. It will attempt to load from a file named `.ftptoolrc` in your home directory. If that fails, it looks in your current directory.

Append `.netrc`

When `ftptool` is first started, it automatically reads the `.ftptoolrc` file. If that is not found, it will look for a `.netrc` file and load from that using a (very) basic method. If you already have a `.ftptoolrc`, and want to load the `.netrc` too, use this option (this is primarily for earlier versions that did not read the `.netrc`).

Add

Add the current information into the list, based on the name in the Alias field.

Change

This is the same as Add, but it will not ask for confirmation if the alias already exists.

Delete

Delete the alias named by the Alias field from the list.

The Plus Button

When pressed, show the more advanced options of `ftptool`. There is a companion Minus button which will hide those options.

Alias

The alias name. When `.netrc` entries are loaded, they appear as 'machine login'.

Last Visited

The last time you successfully connected to the host described by this alias. If you have never connected, then "Never" is displayed. When `ftptool` updates this field, the host alias list is marked as modified. It is not automatically saved for you at this point. This field is only updated if you connect through the host list, and not the current host window.

Comment

A comment describing this ftp sit (X sources, GNU software).

Proxy Host

The name of the host supporting proxy ftp. ftptool handles this the way the Iftp program does (which is part of some consulting special).

Remote Host

The name of the remote host.

Login

The login name to use on the remote host.

Password

The password to give on the remote host. Characters in your password will be displayed as '*'. In the .ftptoolrc file, this field will be encrypted.

WARNING: The encryption algorithm is fairly simple, and made even more breakable since ftptool source is freely available. Encrypting the password allows you to look at it without divulging your passwords, but is not unbreakable. For this reason, the .ftptoolrc file is mode 600.

Transfer Mode

The mode of transfer to use on the remote host. Before any transfer, this is read, so you can change it as you work.

Remote Directory

The remote directory to change to upon connection. Perhaps you always want to go to /pub/gnu on prep.ai.mit.edu.

Local Directory

The local directory to change to upon connection. Perhaps you always want to go to /home/gnu when connecting to prep.ai.mit.edu.

DIR Template

Since ftptool can not know the format the 'dir' command (which is used to fill the remote list) displays on each host, you can tell ftptool the format on a per-host basis. ftptool uses a default format, so unless you have problems, you probably should leave it alone. If you need to determine the format, either connect using normal ftp, or connect with ftptool and use 'dir' in the Custom field. This will display in the session window, so make sure you are logging.

The template is a series of keywords separated by whitespace or characters that must match (so if there are dashes in the date, you theoretically give MONTH-DAY-YEAR). The keywords are:

PERMS - Normal UNIX permissions (drwxrwxrwx)
LINKS - Link count. Currently matched, but discarded.
USER - User name/number
GROUP - Group name/number
SIZE - File size
MONTH - Month (Dec, Jan, ...)
DAY - Day of week (number)
TIME - Hour:minute (09:49) or year (1991)
NAME - Filename.
SKIP - Discard characters until the next whitespace.

Anything else must be matched exactly. The default is given in `ftptool.h` as:

PERMS LINKS USER GROUP SIZE MONTH DAY TIME NAME

which matches the 'ls -lg' output:

```
-rw-r--r-- 1 mike_s develop 8636 Dec 20 09:49 transfer.o
```

A special case is the pattern `NONUNIX`. If this is present anywhere in the template, it sets non-UNIX mode. `Ftptool` will only use 'ls' to get directory listings, and will not expand environment variables when trying to `cd` with the Remote Directory text field. Also, `ftptool` will assume that all directory entries are normal files. You can still attempt to double-click on the files to `cd`, though.

Another special case is the pattern `LOWERNAMES`. This causes all file names read from the remote machine to be converted to lowercase. This is for those machines that output data in uppercase, but can't handle it in return (such as `VMS`).

Local Directory Window

Local Directory Field

Shows the current local directory. This field is also editable, so you can type in a directory and press return to change to it.

Free Space

Gives the amount and percentage of free space available in the file system the directory is in.

Local Directory List

List of local files in the current local directory. Directories are

in bold, with a trailing '/'. You can double-click on a directory to change to it, or use the pop-up menu. Sorting is controlled by properties. Several useful functions are in the pop-up menu.

Session Log Window

Shows all data sent to ftp, as well as all responses from ftp. This is primarily for debugging, but is also useful if the remote machine shows a message of the day.

Transfer Status Window

This shows you how far along each file transfer is. It shows the name and transfer direction, the size, and a gauge showing the percent complete. It updates every 8K block transferred.

Batch Schedule Window

This allows you to perform batch transfers. The Batch Send list shows all the files pending transfer from the local host to the remote host, and the Batch Receive list shows all the files pending transfer from the remote host to the local one. Only one list is shown at a time, based on the setting of the Action item. Addition to a list is performed by selecting the files (or directories) in either the Remote Window (for the Receive list) or the Local Window (for the Send list), then selecting the 'Add to Batch List' option on the list pop-up. Deletion or starting the batch transfer is accomplished in the list pop-up. To schedule a batch transfer, construct a list, and use Set Current to create the appropriate batch name. Then, set appropriate parameters on the Host Information window (such as the remote and local directories). Also, set the time for the transfer. You can do this for multiple hosts, but nothing will happen until you choose the Process Batch item. At that point, the batch list will be processed. Make sure that you bring up the session log before you start or you will not have a log.

About Ftptool Window

Shows information about Ftptool. Who I am, why it was written, and a few credits. Also allows you to send feedback to me.

Properties

In addition to the properties listed below, applying your properties will also save the current state of your pop-up windows (visible or non-visible). At this time, location is not saved.

Ftp tool options

FTP options

The Log Session option causes ftp tool to display the Session Log, and to actually write to it. The Keep Connection Alive option is not part of ftp, but by choosing it ftp tool will send a command every 10 minutes so that the remote server does not time out and disconnect (which it does after 15 minutes of inactivity).

Generate unique

The Local Filenames options cause ftp tool to generate unique local filenames of the form Nlename, where N is a number, if filename already exists on the local machine. The Remote Filenames option causes ftp tool to use the Store Unique FTP command when sending files, to make the remote server generate unique filenames if filename exists.

Automatically

The Connect option causes ftp tool to try to immediately try to connect to the host selected from the Hosts menu. The Show Status option forces the Transfer Status window to be displayed when beginning a transfer. The Try Sun Proxy FTP option causes ftp tool to automatically try to use Sun's proxy FTP (from Sun Consulting) if it cannot resolve the hostname (the host is unknown) or it receives a 'Network unreachable' error when connecting. This is primarily used by Sun folks trying to get out to the Internet.

Window manager

If selected, ftp tool assumes it is running under an OPEN LOOK Window Manager, and does not provide a Quit button. Also, Viewing a window that is already displayed will cause it to be hidden.

Initial Password

The initial password to use, primarily for anonymous ftp.

Case sensitivity

Controls whether or not to respect the case of characters when sorting the Hosts menu and the directory lists.

Deletions

Controls whether or not to request confirmation when deleting files. If you delete directories with this on, it will ask for each file in the

directory.

Directory List options

Unlimit Cache Size

This option causes ftpool to cache `_all_` directories. It could be quite a memory waster.

Directory Cache Size

Determines how many directory listings ftpool will remember. This is managed as an LRU cache, so every time you CD into a directory ftpool first looks in the cache. If it finds it, then instead of actually reading the directory it just displays the list in the cache. This can speed up directory listings on slow links. The larger you make the cache, the more memory you will use and (if you keep listing the same directories) the less likely you'll have to talk to the remote server. However, the larger the cache, the less likely it is that you'll see any changes being made on the cached directories. To effectively not cache at all, set this to 1.

There are two caches, one for local directories and one for remote. This property controls both (setting it to 2 actually means you'll cache 4 directories: 2 local and 2 remote).

Sort remote files by

Controls which field in the remote file list to sort by
You can sort by name, date, size, or type.

Sort order

Controls how to sort the field. For sorting by name: either alphabetical or reverse alphabetical. For sorting by the date: either least recently changed or most recently changed. For sorting by the size: either smallest first or largest first. For sorting by type: either alphabetical or reverse alphabetical (within the types of files).

Hidden files

Controls whether or not to display hidden files (those beginning with a period).

Group files by type

If set, then files are grouped by types (directories first, then regular files, ...) in addition to being sorted as normal.

Sort local files by

Controls which field in the local file list to sort by
You can sort by name, date, size, or type.

Sort order

Controls how to sort the field. For sorting by name: either alphabetical or reverse alphabetical. For sorting by the date: either least recently changed or most recently changed. For sorting by the size: either smallest first or largest first. For sorting by type: either alphabetical or reverse alphabetical (within the types of files).

Hidden files

Controls whether or not to display hidden files (those beginning with a period).

Group files by type

If set, then files are grouped by types (directories first, then regular files, ...) in addition to being sorted as normal.

Viewer options

File viewer

The default viewer for files of unknown (usually text) type. This is a command line, which will be broken up into arguments. '%f' will be replaced by the file name to view; if not specified, the file name will be passed as the last argument.

Archive viewer

The program to use to view archives, which right now are 'tar' archives. This is a command line, which will be broken up into arguments. '%f' will be replaced by the file name to view; if not specified, the file name will be passed as the last argument.

PostScript viewer

The program to use to view PostScript files. This is a command line, which will be broken up into arguments. '%f' will be replaced by the file name to view; if not specified, the file name will be passed as the last argument.

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